

associated with collection service registration information are extracted and identified.

In S2203, based on "product name and model number" and "product-specific sale-to-collection period" in the product information database, the time when consumables are expected to be used up is estimated.

In S2204, the estimates calculated in S2203 are further classified by product, by place, and by period. FIG. 23 shows estimated quantity of collection by district for the month of January. This data has been extracted from the information obtained in S2103 of FIG. 22 according to information about districts and periods. Incidentally, the method of extraction is not limited to the one shown in FIG. 23. The present invention allows for a method based on classification by period in addition to classification by product and district.

In the process of S2204, "product name and model number" information contained in the product information database is used for classification by product. The classification by district is based on the "address" information contained in the user information associated with individual products. The classification by period is used to specify a period for the estimates calculated in S2103. This period can be specified freely. For example, if the period is specified by month, a monthly collection schedule can be set up as shown in FIG. 21. Incidentally, according to the present invention, the period can be

specified not only by month, but also by day, by week, or by any desired period (for example, 2001/12/01 to 2001/12/17).

Furthermore, the host server 81 can determine the  
5 expected delivery dates at the collection center and calculate definite daily collection quantities based on the collection dates when collection from the user was actually performed.

By calculating definite collection quantities during  
10 a given period in this way, the main server 81 may send and provide information about a plan such as the one shown in FIG. 21 to the terminal of the collection center, which then can improve the accuracy of prediction in recycling plans.

When the definite collection quantity is known, it is  
15 possible to draw up short-term plans. For example, recycling plants can determine working hours (presence or absence of overtime work, etc.) and establish effective working procedures (what item to start with). If it is known on May 31, for example, that the quantities to be  
20 collected are 1500 on April 1, 1000 on April 2, and 500 on April 3, a calculation program of the main server 81 can generate a production plan for a recycled product by leveling out the quantities to 1000 on April 1, 1000 on April 2, and 1000 on April 3. Also, shipping trucks for recycled  
25 products can be arranged properly in advance. Warehouses (master and branch whorehouses) can also make proper arrangements for shipping trucks for recycled products.

[Concrete examples of office consumables]

FIG. 13 is a schematic diagram showing an example configuration of a laser beam printer (LBP) equipped with office consumables according to this embodiment.

In FIG. 13, an image scanner 2201 reads an original image and performs digital image processing on it. A printer 2202 forms an image on recording paper, corresponding to the original image read by the scanner 2201, and outputs it.

In the image scanner 2201, reference numeral 2200 denotes a platen cover and 2203 denotes a platen glass. An original 2204 is placed with its recording surface turned to the bottom of the figure and is secured by the platen cover 2200. Light outputted from a fluorescent lamp 2205 is reflected by the original 2204, led to mirrors 2206, 2207, and 2208, and focused on a linear CCD image sensor (hereinafter referred to as the CCD) 2210 through a lens 2209, which is fitted with an infrared cut filter. The CCD 2210 reads the reflected light from the original 2204 by separating it into red (R), green (G), and blue (B) and sends the resulting analog image signals to an image processor 2211. The entire original 2204 is scanned when a unit containing the fluorescent lamp 2205 and mirror 2206 and a unit containing the mirrors 2207 and 2208 are caused to move mechanically at velocities of  $V$  and  $V/2$ , respectively, in the sub scanning direction orthogonal to the CCD 2210.